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Technical Report



**3rd Generation Partners
Technical Specification Group Services and
System Aspects;
Vocabulary for 3GPP Specifications
(3G TR 21.905 version 3.0.0 Release 1999)**

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Reference

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Foreword

This Technical Report has been produced by the 3GPP.

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of this TS, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - ≥3 Indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Scope

The purpose of this report is to identify specialist technical terms used within the 3GPP project for the purposes of specifying service requirements. The motivations for this are:

- To ensure that editors use terminology that is consistent across specifications.
- To provide a reader with convenient reference for technical terms that are used across multiple documents.
- To prevent inconsistent use of terminology across documents.

This document is a collection of terms, definitions and abbreviations related to the baseline documents defining 3GPP objectives and systems framework. This document provides a tool for further work on 3GPP technical documentation and facilitates their understanding.

The terms, definitions and abbreviations as given in this document are either imported from existing documentation (ETSI, ITU or elsewhere) or newly created by 3GPP experts whenever the need for precise vocabulary was identified.

References

References may be made to:

- a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or
- b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or
- c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or
- d) publications without mention of a specific version, in which case the latest version applies.

A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

- [1] GSM 01.04: "Digital cellular telecommunication system (Phase 2+); Abbreviations and acronyms".
- [2] TS 25.990: "Technical Specification Group (TSG) RAN; Vocabulary".

Terms and definitions

0-9

3V technology Smart Card A Smart Card operating at $3V \pm 10\%$ and $5V \pm 10\%$.

1.8V technology Smart Card A Smart Card operating at $1.8V \pm 10\%$ and $3V \pm 10\%$.

3V technology Terminal A terminal operating the Smart Card - Terminal interface at $3V \pm 10\%$ and $5V \pm 10\%$.

1.8V technology Terminal A terminal operating the Smart Card - Terminal interface at $1.8V \pm 10\%$ and $3V \pm 10\%$.

A

Acceptable Cell A cell that the UE may camp on to make emergency calls. It must satisfy certain conditions.

Access conditions A set of security attributes associated with a file.

Charging A function whereby information related to a chargeable event is formatted and transferred in order to make it possible to determine usage for which the charged party may be billed.

Cipher key A code used in conjunction with a security algorithm to encode and decode user and/or signalling data.

Closed group A group with a pre-defined set of members. Only defined members may participate in a closed group.

Coded Composite Transport Channel (CCTrCH) A data stream resulting from encoding and multiplexing of one or several transport channels.

→ **Common Channel** A Channel not dedicated to a specific UE.

Confidentiality The avoidance of disclosure of information without the permission of its owner.

Connected Mode; Connected mode is the state of User Equipment switched on and an RRC connection established.

Connection A communication channel between two or more end-points (e.g. terminal, server etc.).

Connection mode The type of association between two points as required by the bearer service for the transfer of information. A bearer service is either connection-oriented or connectionless. In a connection oriented mode, a logical association called *connection* needs to be established between the source and the destination entities before information can be exchanged between them. Connection oriented bearer services lifetime is the period of time between the establishment and the release of the connection. In a connectionless mode, no connection is established beforehand between the source and the destination entities; the source and destination network addresses need to be specified in each message. Transferred information cannot be guaranteed of ordered delivery. Connectionless bearer services lifetime is reduced to the transport of one message.

Connectionless (for a bearer service) In a connectionless bearer, no connection is established beforehand between the source and the destination entities ; the source and destination network addresses need to be specified in each message. Transferred information cannot be guaranteed of ordered delivery. Connectionless bearer services lifetime is reduced to the transport of one message.

Connectionless service A service which allows the transfer of information among service users without the need for end-to-end call establishment procedures (source: ITU-T I.113).

→ **Control channel** A logical channel that carries system control information.

Controlling RNC A role an RNC can take with respect to a specific set of UTRAN access points. There is only one Controlling RNC for any UTRAN access point. The Controlling RNC has the overall control of the logical resources of its UTRAN access point's.

Conversational service An interactive service which provides for bi-directional communication by means of real-time (no store-and-forward) end-to-end information transfer from user to user (source: ITU-T I.113).

Core network An architectural term relating to the part of UMTS which is independent of the connection technology of the terminal (eg radio, wired).

Corporate code Code which when combined with the network and SP codes refers to a unique Corporate. The code is provided in the GID2 file on the SIM (see Annex A.1.) and is correspondingly stored on the ME.

Corporate personalisation Allows a corporate customer to personalise MEs that he provides for his employees or customers use so that they can only be used with the company's own SIMs.

Coverage area (of a mobile cellular system) An area where mobile cellular services are provided by that mobile cellular system to the level required of that system.

Coverage area Area over which a UMTS service is provided with the service probability above a certain threshold.
Current directory: The latest MF or DF selected.

Current EF: The latest EF selected.

Intra PLMN handover Handover within the same network, ie having the same MCC-MNC regardless of radio access system. Note: this includes the case of UMTS <>GSM handover where MCC-MNC are the same in both cases.

Iu Interconnection point between an RNC and a Core Network. It is also considered as a reference point.

Iub Interface between an RNC and a Node B.

Iur A logical interface between two RNC. Whilst logically representing a point to point link between RNC, the physical realisation may not be a point to point link.

J

<void>

K

Key pair Key pairs are matching private and public keys. If a block of data is encrypted using the private key, the public key from the pair can be used to decrypt it. The private key is never divulged to any other party, but the public key is available, e.g. in a certificate.

L

Local Service A service, which can be exclusively provided in the current serving network by a Value added Service Provider.

Localised Service Area (LSA) A LSA is an operator-defined group of cells, for which specific access conditions apply. This may correspond to an area in which the Core Network offers specific services. A LSA may be defined within a PLMN or globally. Therefore, a LSA may offer a non-contiguous radio coverage.

Location Registration (LR) The UE registers its presence in a registration area, for instance regularly or when entering a new registration area.

Logical Channel A logical channel is an information stream dedicated to the transfer of a specific type of information over the radio interface. Logical Channels are provided on top of the MAC layer.

Logical Model A Logical Model defines an abstract view of a network or network element by means of information objects representing network element, aggregations of network elements, the topological relationship between the elements, endpoints of connections (termination points), and transport entities (such as connections) that transport information between two or more termination points.

The information objects defined in the Logical Model are used, among others, by connection management functions. In this way a physical implementation independent management is achieved.

Logical O&M Logical O&M is the signaling associated with the control of logical resources (channels, cells,) owned by the RNC but physically implemented in the Node B. The RNC controls these logical resources. A number of O&M procedures physically implemented in Node B impact on the logical resources and therefore require an information exchange between RNC and Node B. All messages needed to support this information exchange are classified as Logical O&M forming an integral part of NBAP.

LSA exclusive access cell A UE may only camp on this cell if the cell belongs to the LSAs to which the user has subscribed. Nevertheless, if no other cells are available, the UE of non-LSA users may originate emergency calls from this cell.

LSA only access When LSA only access applies to the user, the UE can only access cells that belong to the LSAs to which the user has subscribed. Outside the coverage area of the subscribed LSAs, the UE may camp on other cells and limited services apply.

LSA preferential access cell A LSA preferential access cell is a cell which is part of the LSA. UEs of users that have subscribed to a LSA of a LSA-preferential-access cell have higher priority to resources than non-LSA users in the same cell.

Paging Paging is the act of seeking a User Equipment.

Paging Block Periodicity (PBP) The period of the occurrence of Paging Blocks. (For FDD, PBP = 1).

Paging Message Receiving Occasion The frame where the UE receives actual paging message.

Paging occasion The frame where the UE monitors in FDD or the paging block, which consists of several frames, for TDD. For Paging Blocks, the value of Paging Occasion is equal to the first frame of the Paging Block.

Peak Power The instantaneous power of the RF envelope which is not expected to be exceeded for [99.9%] of the time.

Peak bit rate A measure of throughput. The maximum bit rate offered to the user for a given time period (to be defined) for the transfer of a bursty signal (source: ITU-T I.210). (The maximum user information transfer rate achievable by a user for a single service data unit transfer.)

Performance The ability to track service and resource usage levels and to provide feedback on the responsiveness and reliability of the network.

Personal Service Environment contains personalised information defining how subscribed services are provided and presented towards the user. The Personal Service Environment is defined in terms of one or more User Profiles.

Personalisation The process of storing information in the ME and activating the procedures which verify this information against the corresponding information stored in the SIM whenever the ME is powered up or a SIM is inserted, in order to limit the SIMs with which the ME will operate.

Personalisation entity Network, network subset, SP, Corporate or SIM to which the ME is personalised

Phonebook A dataset of personal or entity attributes. The simplest form is a set of name-subscriber pairs as supported by GSM SIMs.

Physical channel data stream In the uplink, a data stream that is transmitted on one physical channel. In the downlink, a data stream that is transmitted on one physical channel in each cell of the active set.

→ **Physical Channel** In FDD mode, a physical channel is defined by code, frequency and, in the uplink, relative phase (I/Q). In TDD mode, a physical channel is defined by code, frequency, and time-slot.

Pico cells "Pico cells" are cells, mainly indoor cells, with a radius typically less than 50 metres.

PICH Monitoring Occasion The time instance where the UE monitors PICH within Paging Occasion.

PLMN Area The PLMN area is the geographical area in which a PLMN provides communication services according to the specifications to mobile users. In the PLMN area, the mobile user can set up calls to a user of a terminating network. The terminating network may be a fixed network, the same PLMN, another PLMN or other types of PLMN. Terminating network users can also set up calls to the PLMN. The PLMN area is allocated to a PLMN. It is determined by the service and network provider in accordance with any provisions laid down under national law. In general the PLMN area is restricted to one country. It can also be determined differently, depending on the different telecommunication services, or type of MS. If there are several PLMNs in one country, their PLMN areas may overlap. In border areas, the PLMN areas of different countries may overlap. Administrations will have to take precautions to ensure that cross border coverage is minimized in adjacent countries unless otherwise agreed.

PLMN Operator Public Land Mobile Network operator. The entity which offers a GPRS.

point-to-multipoint (PTM) service: A service type in which data is sent to "all service subscribers or a pre-defined subset of all subscribers" within an area defined by the Service Requester.

Plug-in SIM A Second format of SIM (specified in clause 4).

Point-to-point (PTP) A value of the service attribute "communication configuration", which denotes that the communication involves only two network terminations.

Point-to-point (PTP) service A service type in which data is sent from a single network termination to another network termination.

Ported number A MSISDN that has undergone the porting process.

Ported subscriber The subscriber of a ported number.

System Area The System Area is defined as the group of PLMN areas accessible by MSs. Interworking of several PLMNs and interworking between PLMNs and fixed network(s) permit public land mobile communication services at international level.

T

Teleaction service A type of telecommunication service that uses short messages, requiring a low transmission rate, between the user and the network (source: ITU-T I.112).

Telecommunication service That which is offered by a PLMN operator or service provider to its customers in order to satisfy a specific telecommunication requirement. (source: GSM 01.04, ITU-T I.112). Telecommunication services are divided into two broad families: bearer services and teleservices (source: ITU-T I.210).

Teleservice Is a type of telecommunication service that provides the complete capability, including terminal equipment functions, for communication between users according to standardised protocols and transmission capabilities established by agreement between operators.

Terminal A device into which a UICC can be inserted and which is capable of providing access to UMTS services to users, either alone or in conjunction with a UICC.

Terminal equipment Equipment that provides the functions necessary for the operation of the access protocols by the user (source: GSM 01.04). A functional group on the user side of a user-network interface (source: ITU-T I.112).

Test environment A "test environment" is the combination of a test propagation environment and a deployment scenario, which together describe the parameters necessary to perform a detailed analysis of a radio transmission technology.

Throughput A parameter describing service speed. The number of data bits successfully transferred in one direction between specified reference points per unit time (source: ITU-T I.113).

→ **Traffic channel** A "traffic channel" is a logical channel which carries user information.

Transit delay A parameter describing service speed. The time difference between the instant at which the first bit of a protocol data unit (PDU) crosses one designated boundary (reference point), and the instant at which the last bit of the PDU crosses a second designated boundary (source: ITU-T I.113).

Transmission Time Interval Transmission Time Interval is defined as the inter-arrival time of Transport Block Sets, i.e. the time it shall take to transmit a Transport Block Set.

Transmitter Antenna Gain (dBi) The maximum gain of the transmitter antenna in the horizontal plane (specified as dB relative to an isotropic radiator).

Transport Block Transport Block is defined as the basic data unit exchanged between L1 and MAC. An equivalent term for Transport Block is "MAC PDU".

Transport Block Set Transport Block Set is defined as a set of Transport Blocks that is exchanged between L1 and MAC at the same time instance using the same transport channel. An equivalent term for Transport Block Set is "MAC PDU Set".

Transport Block Set Size Transport Block Set Size is defined as the number of bits in a Transport Block Set.

Transport Block Size Transport Block Size is defined as the size (number of bits) of a Transport Block.

→ **Transport channel** The channels offered by the physical layer to Layer 2 for data transport between peer L1 entities are denoted as Transport Channels. Different types of transport channels are defined by how and with which characteristics data is transferred on the physical layer, e.g. whether using dedicated or common physical channels.

Transport Format A Transport Format is defined as a format offered by L1 to MAC for the delivery of a Transport Block Set during a Transmission Time Interval on a Transport Channel. The Transport Format constitutes of two parts – one dynamic part and one semi-static part.

Transport Format Combination A Transport Format Combination is defined as the combination of currently valid Transport Formats on all Transport Channels of an UE, i.e. containing one Transport Format from each Transport Channel.

Transport Format Combination Set A Transport Format Combination Set is defined as a set of Transport Format Combinations to be used by an UE.

Transport Format Combination Indicator (TFCI) A Transport Format Combination Indicator is a representation of the current Transport Format Combination.

Transport Format Identification (TFI) A label for a specific Transport Format within a Transport Format Set.

Transport Format Set A set of Transport Formats. For example, a variable rate DCH has a Transport Format Set (one Transport Format for each rate), whereas a fixed rate DCH has a single Transport Format.

U

UE Service Capabilities Capabilities that can be used either singly or in combination to deliver services to the user. The characteristic of UE Service Capabilities is that their logical function can be defined in a way that is independent of the implementation of the UMTS system (although all UE Service Capabilities are of course constrained by the implementation of UMTS). Examples: a data bearer of 144 kbps; a high quality speech teleservice; an IP teleservice; a capability to forward a speech call.

UMTS core network refers in this specification to an evolved GSM core network infrastructure or any new UMTS core network infrastructures, integrating circuit and packet switched traffic..

UMTS coverage an area where mobile cellular services are provided in accordance with UMTS standards.

UMTS IC Card (UICC) An IC card (or 'smartcard') of defined electromechanical specification which contains at least one USIM.

UMTS mobile termination part of the UMTS Mobile Station which provides functions specific to the management of the radio interface (Um).

UMTS network Network operated by a single network operator and consisting of UTRAN access networks (WCDMA and/or TD-CDMA), optionally GSM BSS access networks, an UMTS core network.

Universal Mobile Telecommunications System (UMTS) The telecommunications system, incorporating mobile cellular and other functionality, that is the subject of standards produced by 3GPP.

Universal Subscriber Identity Module (USIM) An application residing on the UICC used for accessing UMTS services with appropriate security.

Universal Terrestrial Radio Access Network UTRAN is a conceptual term identifying that part of the network which consists of RNCs and Node Bs between Iu and Uu interfaces.

UPC (Usage Parameter Control) Set of actions taken by the network to monitor and control the offered traffic and the validity of the connection with respect to the traffic contract negotiated between the user and the network.

Uplink An "uplink" is a unidirectional radio link for the transmission of signals from a UE to a base station, from a Mobile Station to a mobile base station or from a mobile base station to a base station.

URA updating URA updating is a family of procedures that updates the UTRAN registration area of a UE when a RRC connection exists and the position of the UE is known on URA level in the UTRAN.

User A logical, identifiable entity which uses UMTS services.

User-network interface The interface between the terminal equipment and a network termination at which interface the access protocols apply (source: ITU-T I.112).

User-user protocol A protocol that is adopted between two or more users in order to ensure communication between them (source: ITU-T I.112).

User access or user network access The means by which a user is connected to a telecommunication network in order to use the services and/or facilities of that network (source: GSM 01.04, ITU-T I.112).